"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0

LAZAREV, Petr Petrovich, akademik [deceased]. Prinimali uchastiye: BERNSHTEYN, L.B.; FEDIN, E.I.; SHMIDT, V.V., KITAYGORODSKIY, A.I., prof., otv.red.; POLENOVA, T.P., tekhn.red.

[Energy, its sources on the earth and its origin] Energiia, ee istochniki na zemle i ee proiskhozhdenie. Moskva, Izd-vo Akad.nauk SSSR, 1959. 274 p. (MIRA 13:2)
(Force and energy)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0

24(4)

SOV/20-127-5-17/58

AUTHORS: Borovskiy, I. B., Shmidt, V. V.

TITLE: The Investigation of the Temperature Dependence of the Fine Structure of the X-Ray Main K-Edge in the Fe-Absorption Spectrum

PERIODICAL: Doklady Akademii nauk SSSR, 1959, Vol 127, Nr 5, pp 997-1000 (USSR)

ABSTRACT: The investigation was carried out by means of a double crystal spectrometer with calcite crystals. Iron foils with a thickness of about 7 $\mu$ were used as adsorbent. They were heated in a high vacuum by the passage of an electric current. The high vacuum prevented oxidation, which was confirmed both by the appearance of the foils after many hours of heating to 950° and by the unchanged electric resistance. Figure 1 shows the experimentally recorded spectra of the K-band at various temperatures. In an earlier paper (Ref 1) it was found that the spectrum deviations have dispersion form. By means of the method described in reference 2 it was possible to correct the spectrum (Fig 2). The initial range ABC (cf Fig 2) was varied neither during passage through Curie point nor by the $\alpha \rightleftarrows \gamma$-transition. The selective peak B of absorption, which may be observed in the

Card 1/3

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0



case of all transition elements of the iron group, is explained by the transition of the electrons into the non-occupied part of the 3d-band. The authors now prove that the fine structure of the short-wave part and its temperature dependence may be brought into connection with the excitation of plasma oscillations of the electron gas in the metal, by which the real shape of the absorption edge is distorted. From references 6 and 7 it follows that in the case of X-ray quanta, the energy of which is near that of the absorption edge, an absorption of the X-ray quantum accompanied by a simultaneous excitation of the plasma is probable. In reference 7 a distance of 7 ev from the line is given as the first maximum. The authors look upon this maximum as excitation of the plasma and conclude that the real absorption edge is superimposed by the plasma image of the initial section ABCD. The real K-edge for the $\alpha$-iron is then drawn (Fig 3) and in a similar manner also the K-edge for $\beta$-iron is determined in which the plasma image is shifted by 11 ev, which was proved by means of electrostatic measurements. Thus, the primary characteristic energy loss of the electrons



APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0



The Investigation of the Temperature Dependence of the Fine Structure of the X-Ray Main K-Edge in the Fe-Absorption Spectrum

between 20-800° does not depend on temperature and amounts to 7.5±0.7 ev, whereas at temperatures above the $\alpha \rightarrow \gamma$ transition a jump occurs to 11.0±0.7 ev. The frequency of the plasma oscillations thus depends on the structure of the crystal lattice. There are 4 figures and 8 references, 5 of which are Soviet.

ASSOCIATION: Institut metallurgii im. A. A. Baykova Akademii nauk SSSR (Institute of Metallurgy imeni A. A. Baykov of the Academy of Sciences, USSR)

PRESENTED: April 27, 1959 by G. V. Kurdyumov, Academician

SUBMITTED: April 22, 1959



APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0

Shmidt, V.V.

PHASE I BOOK EXPLOITATION SOV/4557

Akademiya nauk SSSR. Institut metallurgii

Metallurgiya, metallovedeniye, fiziko-khimicheskiye metody issledovaniya (Physicochemical Research Methods in Metallurgy and Metal Science) Moscow, Izd-vo AN SSSR, 1960. 151 p. (Series: Its: Trudy, vyp. 6) 3,000 copies printed.

Sponsoring Agency: Akademiya nauk SSSR. Institut metallurgii imeni A.A. Baykova.

General Ed.: I.P. Bardin, Academician (Deceased); Resp. Eds. for this Vol.: I.B. Borovskiy, Doctor of Physics and Mathematics, and K.P. Gurov, Candidate of Physics and Mathematics; Ed. of Publishing House: K.P. Gurov, Candidate of Physics and Mathematics; Tech. Ed.: O.M. Gus'kova.

PURPOSE: This collection of articles is intended for researchers in metallurgy and metal science and for scientists engaged in developing physicochemical methods of analysis.

~~Card 1/6~~

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0



COVERAGE: The collection contains 21 studies by members of the Laboratoriya fizicheskikh metodov issledovaniya (Laboratory of Physical Analysis Methods) of the Institut metallurgii imeni A.A. Baykova AN SSSR (Metallurgical Institute imeni A.A. Baykov, Academy of Sciences USSR), published in 1958-59. The articles are concerned with the experimental and theoretical study of physical characteristics of diluted solid solutions and compounds with special properties. The purpose of these studies is to establish the interrelation between the electronic structure of atoms and the structural characteristics of metallic compounds of systems. Some of the articles contain results obtained by applying new physical analysis methods, including the x-ray spectrum method (for analyzing the composition of microvolumes of alloys) and the microfocused x-ray spectroscopic method. Other articles describe the new RSASh-2 and RSASh-ZD apparatus used in the analysis. The first article, by I.B. Borovskiy, deals with the accomplishments and trends of Soviet research in metal science and metallurgy. References accompany each article. Also included is a bibliography containing 383 works by members of the Metallurgical Institute imeni A.A. Baykov. This bibliography was first published in 1956.



APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0



Borovskiy, I.B., and I.A. Ovsyannikova. Study of X-Ray Spectra of the Superconducting Compound CuS 49

Borovskiy, I.B., and V.V. Shmidt. Study of the Temperature Dependence of the Fine Structure of the Main K-Edge X-Ray Absorption in Iron 54

Borovskiy, I.B., and V.A. Batyrev. Nature of the Fine Structure of the Main K-Edge of the X-Ray Absorption Spectrum of Elements of the Transition Iron Group 60

Borovskiy, I.B., A.N. Kabanov, Yu. M. Kushnir, and V.V. Shmidt. Effect of Temperature on the Amount of Characteristic Energy Losses of Electrons in Iron 66

Ditsman, S.A., and V.A. Batyrev. Effect of Absorption in the Emitter on the Form of the X-Ray Spectrum Lines 70

Borovskiy, I.B., and I.D. Marchukova. Method of Constructing the Phase Fields of State Diagrams 73

Borovskiy, I.B., N.P. Il'in, and L. Ye Loseva. Study of Diffusion in Ordered Solid Solutions 77



APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0



Il'in, N.P., and L. Ye. Loseva. Some Results of Using the X-Ray Spectrum Method of Analysis of the Composition of Microvolumes of Alloys 81

Dubman, S.A. On the Method of Microfocused X-Ray Spectroscopy 89

Il'in, N.P. The RSASh-ZDS Universal X-Ray Spectroscopic Installation for Studying the Chemical Composition in Microvolumes of a Substance 97

Meyer, A.N. X-Ray Spectrum Analyzer of the Chemical Composition in Microvolumes of a Substance 102

Shmidt, V.V. Analysis of the Reading Accuracy of a Double-Crystal Spectrometer 109

Skotnikov, S.A. Methods and Results of a Quantitative Spectral Analysis of Phases in Metals 117



APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0



Bogdanov, N.A. Methods of Preparing Chromium Alloys of High-Grade Purity 124

Bibliography of Works Published by Scientists of the Metallurgical Institute imeni A.A. Baykov, Academy of Sciences USSR, in 1956 [Compiled by I.K. Shapovalov] 138

AVAILABLE: Library of Congress

Card 6/6

JA/wrc/mas
2-9-61

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0

SHMIDT, V.V.

Analyzing the precision of readings of a two-crystal spectrometer. Prib.i tekh.eksp. no.4:36-39 Jl-Ag '60. (MIRA 13:9)

1. Institut metallurgii ANSSSR.
(Spectrometer--Testing)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0

BOROVSKIY, I.B., SHMIDT, V.V.

Investigating the temperature relation of the fine structure of the main K-edge in X-ray absorption in iron. Trudy Inst. met. no.6:54-59 '60. (MIRA 13:8)
(Absorption spectra) (Iron--Metallography)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0

BOROVSKIY, I.B., KABANOV, A.N., KUSHNIR, Yu.M., SHMIDT, V.V.

Effect of temperature on the amount of characteristic electron energy losses in iron. Trudy Inst. met. no.6:66-69 '60.
(MIRA 13:8)

(Iron--Metallography)
(Plasma (Ionized gases))

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0

SHMIDT, V.V.

Analysis of the accuracy of readings by a two-crystal spectrometer. Trudy Inst. met. no.6:109-116 '60. (MIRA 13:8)
(Spectrometer)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0

83572

S/056/60/038/005/005/050
B006/B070

24.7700

AUTHORS: Borovskiy, I. B., Kabanov, A. N., Kushnir, Yu. M., Shmidt, V. V.

TITLE: The Effect of Temperature on the Characteristic Energy Losses of Electrons in Iron

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1960, Vol. 38, No. 5, pp. 1383-1387

TEXT: Borovskiy and Shmidt (Ref. 1) studied the fine structure of the main K-absorption edge of X-rays in iron and found that when the absorber is heated beyond the $\alpha \rightarrow \gamma$ transition temperature (910°C) this structure is much altered. A relation between the fine structure and the characteristic energy losses of the electrons at room temperature was also discovered by them. There are many publications dealing with the nature of the characteristic energy losses of electrons when passing through thin films of matter. Some of the models - the inelastic collisions with valence electrons, and the interaction between the charged particles and the totality of the valence electrons - are discussed in the introduction of the present paper. This interaction leads to the excitation of collective oscillations of the

Card 1/3

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0



The Effect of Temperature on the Characteristic Energy Losses of Electrons in Iron

S/056/60/038/005/005/050
B006/B070

electron gas (plasma oscillations). The investigations described in the present paper show that a compromise between the following two points of view may prove correct, namely, that the energy losses are due to the excitation of plasma oscillations, or that they are due to single-electron transitions between energy bands. The experimental method is described in detail. An electrostatic analyzer of the electron velocities was used, which had a resolution of 0.5 ev at an accelerating voltage of 75 kev. The samples were 0.08 - 0.10 mm thick, and the electron beam had an energy of 70 - 75 kev. The experiments were performed in vacuum ($5 \cdot 10^{-6}$ torr). The characteristic energy losses of the electrons were measured for the following temperatures of the samples: 20°, 800°, and 930°C. Two measurements for checking were made at 600°C. The curves taken at 20° and 930°C (Fig.) show the energy losses (blackening of the photographic plate) as a function of the energy. The form of the curves is found to be independent of the temperature. The first characteristic loss in α-Fe (cubic, body-centered, a = 2.86 A) at 20°C is (7.5±0.7)ev; the following two lines at 14.8 and 21.5 ev may be considered to be multiples of the first. In γ-Fe (cubic, face-centered, a = 3.60 A at 940°C) there are essential deviations. Here, the first characteristic loss is (11.6±0.6)ev; the following lines at



APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0

83572

The Effect of Temperature on the Characteristic Energy Losses of Electrons in Iron

S/056/60/038/005/005/050
B006/B070

23 and 33 ev may again be taken to be its multiples. A discussion of the results from the points of view of single-electron transitions and the excitation of plasma oscillations shows that further studies are necessary for a final clarification of this effect. The numerical data of measurement are listed in two tables. There are 1 figure, 2 tables, and 15 references: 4 Soviet, 7 US, 1 German, 1 Japanese.

ASSOCIATION: Institut metallurgii Akademii nauk SSSR
(Institute of Metallurgy of the Academy of Sciences USSR)

SUBMITTED: November 4, 1959

Card 3/3

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0

86899

S/056/60/039/005/016/051
B006/B070

24.6300

AUTHOR: Shmidt, V. V.

TITLE: Effect of the Interelectron Interaction in Metals on the Fine Structure of X-Ray Spectra

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1960, Vol. 39, No. 5(11), pp. 1269-1275

TEXT: This paper deals with a theoretical consideration of the X-ray quantum absorption in metals on a simultaneous excitation of a plasmon in a range close to the absorption edge. The calculations are carried out for the transition metals of the iron group. The problem consists in calculating the ratio of the X-ray absorption coefficient $\tau$ taking the simultaneous production of plasmons into consideration, versus the absorption coefficient $\tau_0$ which is obtained from the single electron theory of X-ray spectra. For this purpose the author examines a system consisting of 1) an electron initially on the K-shell which is placed in a periodic ion field and, when absorbing the X-ray quantum, turns into a

Card 1/3

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0



Effect of the Interelectron Interaction in Metals on the Fine Structure of X-Ray Spectra

S/056/60/039/005/016/051
B006/B077

free state above the Fermi level; 2) a gas consisting of N free metal electrons whose entire negative charge is compensated by the positive charge of the metal ions forming the background, and 3) the field of the X-ray photons. The Schrödinger equation is put down and it is then shown how under the application of a formalism introduced by D. N. Zubarev the problem of determining the absorption probability of an X-ray quantum with the simultaneous excitation of a plasmon (or generation of an electron-hole pair) can be reduced to the problem of determining the transition probability of specific states of the Hamiltonian $H_o$ under action of perturbation H. The matrix elements are calculated for these transitions. For the total absorption probability $W_q^o$ of an X-ray quantum by an atom per unit of time the following expression is given: $W_q^o = \frac{2\pi}{\hbar} |H_{\nu o}|^2 N_{4p}$ $= 64 \frac{\pi^3 \hbar^2 e^2 A_o^2}{Vm^2 c^2 d^2} \left(\frac{a}{Z_o}\right)^3 N_{4p}$, where $N_{4p}$ is the state density in the 4p-band of the metal, and d the lattice parameter. With $\tau/\tau_o = W_q/W_q^o = \chi$ one obtains $\chi \sim \frac{3 \cdot 10^7 \pi^3 NG}{V^2} \frac{e^4 a^7 k_c}{\gamma^2 d^2 \hbar^2} \frac{E_{3d}+\varepsilon_p}{\varepsilon_p} \frac{N_{3d}}{N_{4p}} \frac{1}{Z^7}$ ; $\varepsilon_p \equiv \hbar\omega_p$, $\omega_p = \sqrt{4\pi Ne^2/Vm}$.

Card 2/3

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0

86899

Effect of the Interelectron Interaction in Metals on the Fine Structure of X-Ray Spectra

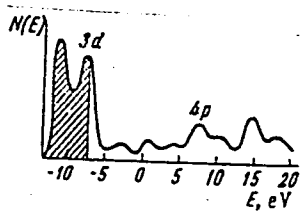
S/056/60/039/005/016/051
B006/B077

The diagram shows the distribution of the state density of free electrons for the transition elements of the iron group (the hatched section represents iron) under the following assumptions: $V=1cm^3$, $N=G=10^{23}$, $k_c = 1\ A^{-1}$ $d = 3A$, $(\varepsilon_{3d}+\varepsilon_p)/\varepsilon_p \sim 1$, $N_{3d}/N_{4p} = 5$. The results are finally discussed.

The author thanks I. B. Borovskiy, V. L. Ginzburg and K. P. Gurov for discussions. V. A. Batyrev, I. I. Sobel'man and Ye. L. Feynberg are mentioned. There are 1 figure, 1 table, and 15 references: 7 Soviet, 6 US, 1 British, and 1 Japanese.

ASSOCIATION: Institut metallurgii Akademii nauk SSSR (Institute of Metallurgy of the Academy of Sciences USSR)

SUBMITTED: April 28, 1960




Card 3/3

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0

SCHMIDT, V. V., Cand Phys-Math Sci -- "Effect of ~~atomic~~ thermal oscillations of atoms and of ~~electronic~~ collective ~~oscillations~~ excitations of electrons in metals on the fine structure of absorption X-ray spectra." Mos, 1961. (Inst of Metallurgy im A. A. Baykov)

(KL, 8-61, 229



APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0

BOROVSKIY, I.B.; SHMIDT, V.V.

Effect of small admixtures of tungsten on the temperature dependence of the fine structure of the absorption K-spectrum of Fe. Izv. AN SSSR. Ser. fiz. 25 no.8:983-985 Ag '61. (MIRA 14:8)

1. Institut metallurgii im. A.A. Baykova AN SSSR.
(Iron--Spectra)
(Tungsten)
(X-ray spectroscopy)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0

SHMIDT, V.V.

Theory of the temperature dependence of the fine structure of X-ray absorption spectra. Izv. AN SSSR. Ser. fiz. 25 no.8:977-982 Ag '61. (MIRA 14:8)
(X-ray spectroscopy)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0

SHMIDT, V.V.

Temperature dependence theory of the fine structure of X-ray absorption spectra. Trudy Inst. met. no.15:120-132 '63.
(MIRA 16:9)

(Crystal lattices--Absorption spectra)
(X-ray spectroscopy)
(Metals, Effect of temperature on)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0

SHMIDT, V.V.

Critical current and critical magnetic field in solid superconductors. Zhur. eksp. i teor. fiz. 45 no.6:1992-2005 D'63. (MIRA 17:2)

1. Institut metallurgii imeni A.A. Baykova.

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0

S/048/63/027/003/015/025
B106/B238

AUTHOR: Shmidt, V. V.

TITLE: Theory of the temperature dependence of fine structure in X-ray absorption spectra. The case of high temperatures

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Seriya fizicheskaya, v. 27, no. 3, 1963, 384-389

TEXT: Extending earlier work (Ref. 1: Shmidt V. V., Izv. AN SSSR. Ser. fiz., 25, 977 (1961)), the author calculates the temperature dependence of fine structure in X-ray absorption spectra at high temperatures. According to Ref. 1, the average value $\bar{\mu}$ in time of the variable part of the absorption coefficient is $\bar{\mu} = \sum_{is} A_s \sin B_s \exp(-\sum_{\vec{x}_j} y^2/4)$ (1). If the assumption $\vec{x}_j \vec{r}_s \ll 1$ made in Ref. 1 is disregarded, then $y = 4K(\vec{a}_{\vec{x}_j} \vec{e}_{is}) \sin \left[ r_s (\vec{x}_j \vec{e}_{is})/2 \right]$ (3). Proceeding from the sum $I = \sum_{\vec{x}_j} y^2/4$

Card 1/6

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0



from (1) to the integral in $\varkappa$ space yields

$I = (4VK^2/8\pi^3) \sum_j \int (\vec{a}_{\vec{\varkappa}_j} \vec{e}_{is})^2 \sin^2 \left[ r_s(\vec{\varkappa}\vec{e}_{is})/2 \right] d^3\varkappa$ (5). $\varkappa$ is the wave number of the phonons, $r_s$ the radius of the spherical s coordination shell, and V the volume of the system. In spherical coordinates, summing over j in (5) and integrating over the angle $\vartheta$ between the wave vector $\vec{\varkappa}$ and of the position vector $\vec{e}_{is}$ gives $I = \left[ 4VK^2/(2\pi)^2 \right] \int_0^{\varkappa_m} a^2_{\vec{\varkappa}} \varkappa^2 (1-(\sin\varkappa r_s)/\varkappa r_s) d\varkappa$, (6) where $\varkappa_m$ is the maximum phonon wave number. The amplitude $a^2_{\vec{\varkappa}_j}$ of the normal wave as a function of the energy of the wave is given by $a^2_{\vec{\varkappa}_j} = (2\hbar/Nm\omega_{\vec{\varkappa}_j}) \left[ (\exp(\hbar\omega_{\vec{\varkappa}_j}/kT) - 1)^{-1} + 1/2 \right]$, (9) where m is the mass of the atom, and N the number of atoms in the solid. It is assumed that the velocities $v_1$ and $v_2$ of the longitudinal and transverse waves are equal to a mean velocity v of propagation, and that a linear dispersion law



APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0



$\omega_{\varkappa\rho} = v\varkappa$ (10) holds for the phonons. Substituting (9) and (10) in (6) and transforming gives

$$I = \left[8K^2 v_0 (kT)^2/(2\pi)^2 \hbar m v^3\right] \int_0^{\theta/T} x\left[1/(e^x-1) + 1/2\right](1 - (\sin\alpha x)/\alpha x)\, dx \quad (11).$$

$v_0$ is the volume of one atom, $\alpha = r_s \varkappa_m T/\theta$, $\theta = \hbar\omega_m/k$, and $x = \hbar\omega_{\varkappa}/kT$. The integral in (11) can be represented as the sum of the two addends $D_1$ and $D_0$ :

$$D_1 = \int_0^{\theta/T} x\,(e^x - 1)^{-1}\left(1 - \frac{\sin\alpha x}{\alpha x}\right) dx, \quad (12)$$

$$D_0 = \frac{1}{2}\int_0^{\theta/T} x\left(1 - \frac{\sin\alpha x}{\alpha x}\right) dx. \quad (13)$$

The exponential coefficient I in (6) can also be decomposed into two addends:



APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0



$$I_1 = \frac{8K^2 v_0 (kT)^2}{(2\pi)^3 \hbar m v^3} D_1, \qquad (14)$$

$$I_0 = \frac{8K^2 v_0 (kT)^2}{(2\pi)^3 \hbar m v^3} D_0. \qquad (15)$$

Integrating $D_0$ and substituting gives $I_0 = (3\hbar^2K^2/km\theta)\left\{1 + 2\left[\cos(r_s\varkappa_m)-1\right]/r_s\varkappa_m\right)^2$ (16). $I_0$ is independent of temperature and describes the effect of zeropoint vibrations of the crystal lattice on the fine structure of the X-ray absorption spectra. $D_1$ must be calculated separately for low temperatures ($t \ll \theta$) and medium and high temperatures ($T \gtrsim \theta/3$). The variable part of the absorption coefficient for low temperatures is $\bar{\mu} = \sum_s N_s A_s \sin(2Kr_s+2\eta_{l1}) e^{-(I_1+I_0)}$ (20), where $N_s$ is the number of atoms in the s shell, and $I_1$ is given by



APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0



$$I_1 = 7{,}7\,\frac{\hbar^2}{k}\cdot\frac{K^2 r_s^2}{m\theta v_0^{1/3}}\,F(T/\theta),$$
$$F(T/\theta) = (e^{\theta/T}-1)^{-1} + \frac{1}{3}\,\frac{T}{\theta}\,f_D(T/\theta). \qquad (18)$$

For medium and high temperatures, $\bar{\mu} = \sum_s N_s A_s \sin(2Kr_s + 2\eta_l) e^{-I}$ (24), where I is given by

$$I = \frac{12\hbar^2}{k}\cdot\frac{K^2}{m\theta}\,\Phi(T/\theta), \qquad (22)$$
$$\Phi(T/\theta) = \varphi_1(s)\,\frac{T}{\theta} + \varphi_2(s)\,\frac{\theta}{T} + \varphi_3(s)\left(\frac{\theta}{T}\right)^2;$$

$$\varphi_1(s) = 1 - \frac{\sin z}{z}, \qquad (23)$$
$$\varphi_2(s) = \frac{1}{36} + \frac{\cos z}{12z^2} - \frac{\sin z}{12z^3},$$
$$\varphi_3(s) = -\frac{1}{3600} - \frac{\cos z}{720z^2} + \frac{\sin z}{240z^3} + \frac{\cos z}{120z^4} - \frac{\sin z}{120z^5},$$

where
где $z = r_s\varkappa_m$.



APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0



Equations (20) and (24) explain two phenomena: the disappearance of distant short wave peaks in the fine structure before the maxima near the edge when the absorber is heated, and the temperature dependence of the hyperfine structure found experimentally. It follows from (18) and (20) that a multiplier $\exp(-I_o)$ remains present even at absolute zero, causing the contrast in the fine structure to be weakened. Hence, (20) also takes into account the effect of the zeropoint oscillations of the lattice on the fine structure of the spectrum. (20) and (24) were checked against values obtained experimentally for the Fe $\mu_D/\mu_A$ peak and the Ni $\mu_E/\mu_C$ peak at various temperatures. The agreement was very good. There are 2 figures and 1 table.

ASSOCIATION: Institut metallurgii im. A. A. Baykova
(Institute of Metallurgy imeni A. A. Baykov)



APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0

EWP(q)/EWT(m)/BDS--AFFTC/ASD--JD
L 10786-63
ACCESSION NR: AP3000067 S/0056/63/044/005/1675/1678 54
52

AUTHOR: Shmidt, V. V. 18

TITLE: On the magnetization curve of superconducting alloys in the neighborhood of the second critical field

SOURCE: Zhurnal eksper. i teoret. fiziki, v. 44, no. 5, 1963, 1675-1678

TOPIC TAGS: superconducting alloy, Ginzburg-Landau superconduction theory, Abrikosov superconduction theory, Tl-In superconductor, Ta-Nb superconductor, $Nb_3Sn$ superconductor, Goodman superconduction theory, superconduction, superconduction theory

ABSTRACT: The correctness of the Ginzburg-Landau theory of superconduction, as developed in 1957 by Abrikosov to suggest a structure of mixed-state high-field superconducting alloys, is demonstrated by the use of experimental data taken from American, British, and Soviet journals and adapted for comparison with Abrikosov's formulas. It is shown in particular that the shape of theoretically and experimentally derived magnetization curves in the neighborhood of the second critical field is in satisfactory agreement for various concentrations of Tl-In as well as

Card 1/2

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0

L 10786-63 2
ACCESSION NR: AP3000067

for 36% Ta-64% Nb and for $Nb_3Sn$. It is remarked that Goodman's 1961 work, although akin to that of Abrikosov, cannot be experimentally confirmed, as Goodman himself has acknowledged. "We take this opportunity to express our thanks to V. L. Ginzburg for his interest in this work and its discussion." Orig. art. has: 4 formulas and 1 table.

ASSOCIATION: Institut metallurgii im. A. A. Baykova (Institute of Metallurgy)

SUBMITTED: 24Dec62 DATE ACQ: 12Jun63 ENCL: 00

SUB CODE: PH NO REF SOV: 003 OTHER: 005

mcs/cs

Card 2/2

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0

ACCESSION NR: AP4009124 S/0056/63/045/006/1992/2005

AUTHOR: Shmidt, V. V.

TITLE: Critical current and critical magnetic field in hard superconductors

SOURCE: Zhurnal eksper. i teoret. fiziki, v. 45, no. 6, 1963, 1992-2005

TOPIC TAGS: superconductors, hard superconductors, filamentary superconductors, plastically deformed superconductors, critical current, critical magnetic field, filament density, superconducting inclusions, niobium stannate superconductor

ABSTRACT: The current distribution over the cross section and the dependence of the critical current on the external magnetic field is investigated in a superconductor represented as a plane-parallel slab of dielectric or of nonsuperconducting metal interpenetrated by a large number of thin superconducting filaments which are parallel to one another and to the surface of the slab. The filaments are assumed to coincide with the dislocation lines produced following

Card 1/2

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0

ACCESSION NR: AP4019231 S/0056/64/046/002/0649/0653

AUTHOR: Shmidt, V. V.

TITLE: Shape of nuclear magnetic resonance signal from superconducting alloys near the second critical field

SOURCE: Zhurnal eksper. i teor. fiz., v. 46, no. 2, 1964, 649-653

TOPIC TAGS: superconductivity, nuclear magnetic resonance, nucleus distribution function, asymmetry coefficient, excess coefficient

ABSTRACT: In order to find the relation between the distribution function of the nuclei in a superconducting alloy and the magnetic field, the author determines the shape of the nuclear magnetic resonance line of any of the components of such an alloy (in the form of a long cylinder placed in a longitudinal external magnetic field exceeding the second critical field) and calculates the second, third, and fourth central moments of this line. The shape of the nuclear magnetic resonance signal of the sample when all the alloy atoms are in a homogeneous magnetic field is assumed

Card 1/2

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0

ACCESSION NR: AP4019231

known. It is shown that if the Ginsburg-Landau theory (V. L. Ginsburg, L. D. Landau, ZhETF, v. 20, 1064, 1950) is valid, then the distribution function has an asymmetrical form with asymmetry and excess coefficients equal to -0.57. An experimental check on this conclusion is believed desirable and it is pointed out that macroscopic distortions and mechanical stresses in the superconductor can change the results and cause the distribution function to approach a Gaussian curve.

ASSOCIATION: Institut metallurgii im. A. A. Baykova AN SSSR (Metallurgy Institute)

SUBMITTED: 10Jul63 DATE ACQ: 27Mar64 ENCL: 00

SUB CODE: PH NO REF SOV: 002 OTHER: 001

Card 2/2

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0

ACCESSION NR: AP4042415 S/0056/64/047/001/0387/0388

AUTHOR: Shmidt, V. V.

TITLE: Correction to the article "On the critical current and critical magnetic field of rigid superconductors" (ZhETF v. 45, 1992, 1963)

SOURCE: Zh. eksper. i teor. fiz., v. 47, no. 1, 1964, 387-388

TOPIC TAGS: superconductivity, external magnetic field, transverse magnetic field

ABSTRACT: It is stated that formula (10) of the original article, for the critical current of a thin superconducting filament in an external magnetic field, is valid when $H_0$ and $H \ll H_k$, where $H_k$ is the critical transverse field of the thin filament. An exact formula is presented

1/2

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0

ACCESSION NR: AP4042415

$$H_{J_c} = \frac{\sqrt{2}H_{cm}}{3\sqrt{3}} \frac{r_0}{\delta_0} \left(1 - \frac{H_0^2}{H_\kappa^2} - \frac{H^2}{2H_\kappa^2}\right)^{1/2}$$

which is valid over the entire range of variation of $H_0$ and H. The final results of the original article are corrected to agree with this new formula. This affects the distribution of the critical current in the filamentary superconductor, the dependence of the total critical current on the filament density, and the dependence of the critical current on the external magnetic field. Apart from the order of magnitude, all the conclusions originally made remain in force also in the exact calculation. Orig. art. has: 6 formulas.

ASSOCIATION: None

SUBMITTED: 14Apr64 ENCL: 00

SUB CODE: EM NR REF SOV: 001 OTHER: 000

2/2

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0

L 3853h-66 EWT(l)/T/EWP(t)/ETI/ETC(m) IJP(c) GG/JD/JG/GD

ACC NR: AT6014745 SOURCE CODE: UR/0000/65/000/000/0017/0028

65
64
B+1

AUTHOR: Shmidt, V. V.

ORG: none

TITLE: Theory of superconductors with high critical fields and currents

SOURCE: Soveshchaniye po metallovedeniyu i metallofizike sverkhprovodnikov. 1st, 1964. Metallovedeniye i metallofizika sverkhprovodnikov (Metallography and physics of metals in superconductors); trudy soveshchaniya. Moscow, Izd-vo Nauka, 1965, 17-28

TOPIC TAGS: superconductivity, ~~critical~~ current density, critical magnetic field

ABSTRACT: The theory of superconductors in large magnetic fields with large current densities is considered. Physically homogeneous superconductors can be divided into two groups: I) (SC1) consisting of all superconducting elements except niobium, and II) (SC2) consisting of niobium and most superconducting alloys and compounds. The basic difference between the two groups is that the boundary energy $\sigma_{ns}$ between the normal and superconducting phases is positive for SC1 and negative for SC2. This and other differences and their consequences are discussed in detail. The behavior of hard superconductors (SC2 containing various inhomogeneities caused by plastic deformation, decomposition of solid solutions, precipitation of other phases, etc, whose

Card 1/2

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0

L 38534-66

ACC NR: AT6014745

characteristic dimensions are much greater than atomic dimensions) is described. A theory, based on an idea introduced by P. W. Anderson (Phys. Rev. Lett., 1962, 9, 309), is presented, which explains the strong dependence of the high critical currents in hard superconductors on the concentration of inhomogeneities. Experiments on the magnetization of hollow cylinders of hard superconductors (see Y. B. Kim, C. F. Hempstead, and A. R. Strand. Phys. Rev., 1963, 131, 2486; 1963, 129, 528) are described. These experiments are successfully explained by this theory. The filament model of hard superconductors is discussed in detail. It is shown that many of the characteristics of hard superconductors can be explained by assuming that the superconducting metal is permeated by a random network of thin, mutually intersecting, superconducting filaments which have a much higher critical field than that of the whole sample. It has been hypothesized that these filaments are dislocation lines in the plastically deformed metal. Equations for the critical currents and magnetic fields based on this hypothesis are given, and several experiments determining their dependence on the degree of plastic deformation are described. Orig. art. has: 26 equations and 10 figures.

SUB CODE: 20/ SUBM DATE: 23Dec65/ ORIG REF: 007/ OTH REF: 028

Card 2/2

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0

L 22544-66 EWT(l)/EWT(m)/EWA(d)/T/EWP(t) IJP(c) JD

ACC NR: AP6008742 SOURCE CODE: UR/0386/66/003/003/0141/0145

AUTHOR: Shmidt, V. V.

ORG: Institute of Metallurgy im. A. A. Baykov (Institut Metallurgii)

TITLE: Phase transition in superconductors of small size

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki. Pis'ma v redaktsiyu. Prilozheniye, v. 3, no. 3, 1966, 141-145

TOPIC TAGS: superconductivity, phase transition, specific heat, critical point, critical magnetic field

ABSTRACT: The purspose of this investigation was to show that there exists an object for which fluctuations of $\Psi$, the "effective wave function" of the Ginzburg-Landau superconductivity theory or, from the point of view of the microscopic theory, fluctuations of the energy gap $2\Delta(T)$, can exist and lead to the "smearing" of the second-order phase transition over a certain temperature interval. These are superconducting particles of a size small compared with $\xi_0$ (the dimension of the Cooper pair). Large fluctuations of the quantity $\Psi$ lead to the appearance of an anomalous variation of the specific heat near the critical temperature $T_c$. Calculation of the specific heat $C_p$ by the method proposed by A. P. Levanyuk (Fiz. tverdogo tela v. 5, 1776, 1963) yields the asymptotic behavior of the specific heat for very large and very small particle volumes. Similar results are obtained

Card 1/2

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0

L 22544-66
ACC NR: AP6008742

for finely-dispersed superconductors and in investigations of phase transitions based on the magnetic field. The results can also be used to explain the experimentally known fact that the magnetic moment of colloidal superconducting particles does not vanish at the critical magnetic field, but attenuates gradually as the field increases above critical. In the conclusion it is noted that although the theory of the phase transition in a superconductor, based on the use of the BCS model Hamiltonian, does not lead to singularities of the specific heat at the transition point, but to a finite discontinuity, a more accurate account of the interaction between the electrons in the superconductor should lead to the appearance of a singularity in the specific heat at the transition point. Whereas in a bulky superconductor the temperature interval near $T_c$ where this singularity becomes noticeable is so small that an experimental investigation of this phenomenon is impossible, it can be deduced from the calculation presented in this article that for finely-dispersed superconductors this temperature interval increases by many orders of magnitude and can reach values of the order of one degree. An experimental investigation of this phenomenon would yield new data on the interaction between electrons in a superconductor. The author thanks V. L. Ginzburg and D. A. Kirzhnits for help and an evaluation of the work. Orig. art. has: 1 figure and 3 formulas.

SUB CODE: 20/ SUBM DATE: 20Dec65/ ORIG REF: 006/ OTH REF: 001

Card 2/2 BK

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0

ACC NR: AP7005138 SOURCE CODE: UR/0126/66/022/004/0621/0622

AUTHOR: Shmidt, V. V.

ORG: Institute of Metallurgy im. A. A. Baykov, AN SSSR (Institut metallurgii AN SSSR)

TITLE: A laminated superconducting strip

SOURCE: Fizika metallov i metallovedeniye, v. 22, no. 4, 1966, 621-622

TOPIC TAGS: superconductivity, laminated material, critical magnetic field

ABSTRACT: The critical parameters of laminated superconducting strips, made by combining thin superconducting strips parallel to each other and separating them with dielectric material are determined theoretically. Laminated superconductors can carry larger critical currents in a strong magnetic field ($H_0$) which is parallel to the surfaces of these strips. An equation is given for the ratio between the strength of a magnetic field on the surface of a thin strip for a given critical current $I_c$ and the critical field of the bulk material as a function of the depth of penetration ($\delta_0$) of a weak magnetic field, the Ginsburg-Landau parameter, the critical field of the strip ($H_{cs}$), the half thickness of a layer ($d$), and $H_0$. The Maxwell relation is also given for the critical moment when each layer of the strip carries the critical current. The

Card 1/2 UDC: 539.292 : 537.312.62 : 538.01

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0

ACC NR: AP7005138

simultaneous solution of these two equations gave the distribution of critical current ($j_c$) through the cross section of the strip in the absence of an external magnetic field. The full critical current $J_c = \int_{-L}^{L} j_c dy$ was calculated as a function of the full thickness of the strip, the parameter $A$, $\delta_0$, $H_{cs}$, and $d$. From the equation for $J_c$ it was shown that $J_c \to J_{c_{max}}$ when $AL \to \infty$, although at $AL = 2$ the value of $J_c$ is $0.9J_{max}$. Thus it is irrational to increase the number of layers in a strip indefinitely, since the optimum number ($N_0$) was 2: $(AL)_0 = AN_0(2d + a)/2 = 2$, where $a$ is the dielectric thickness. In conclusion the author expressed his thanks to I. B. Borovskiy for his interest in the work and discussions. Orig. art. has: 7 formulas.

SUB CODE: 20,11,14/ SUBM DATE: 12Oct65/ ORIG REF: 003/ OTH REF: 004

Card 2/2

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0

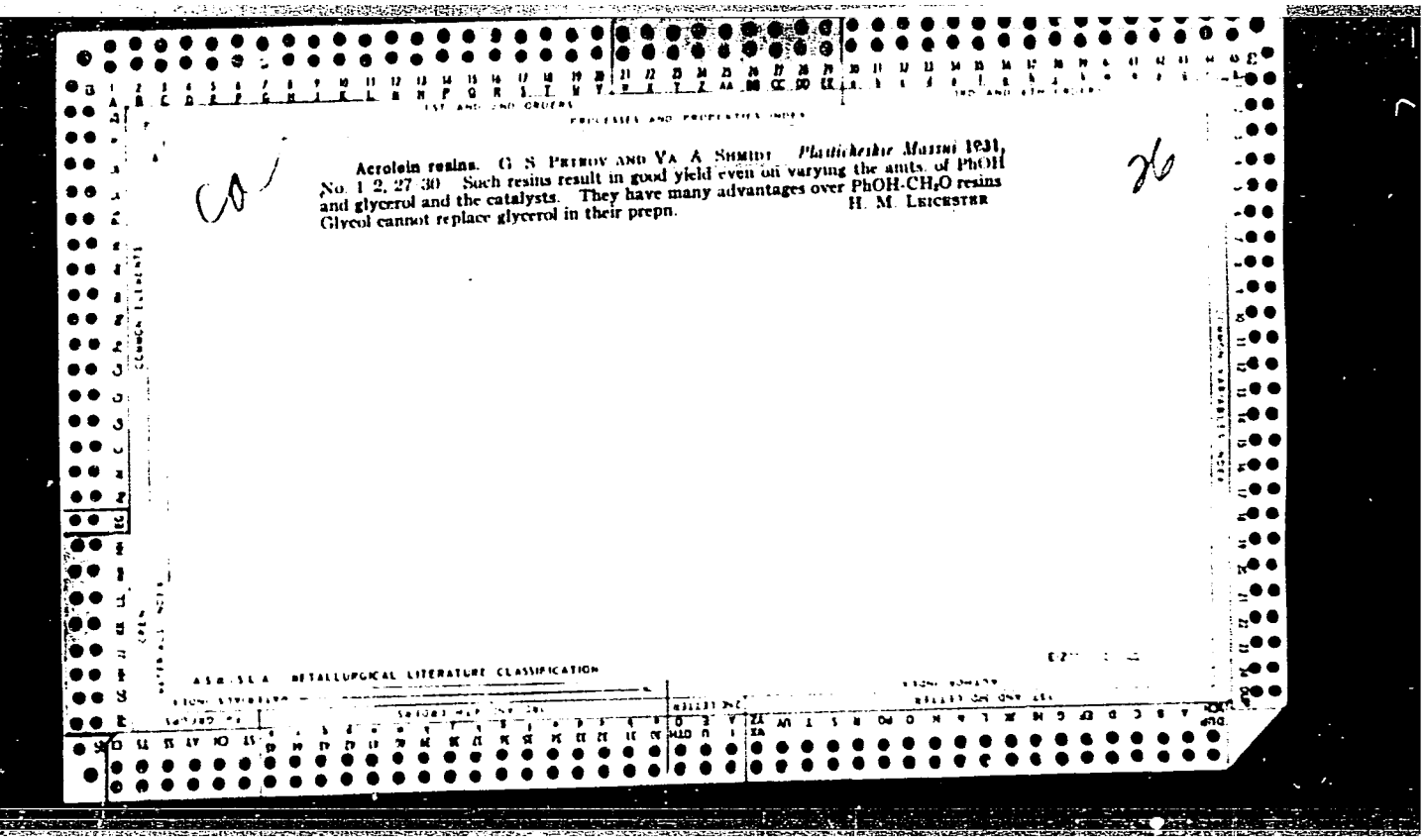
KATSENELENBAUM, Boris Zakharovich;SIFOROV, V.I., otv. red.; SHMIDT, V.V., red. izd-va; RYLINA, Yu.V., tekhn. red.

[Theory of nonuniform wave guides with slowly varying parameters] Teoriia nereguliarnykh volnovodov s medlenno meniaiushchimsia parametrami. Moskva, Izd-vo Akad. nauk SSSR, 1961. 215 p. (MIRA 14:10)

1. Chlen-korrespondent AN SSSR (for Siforov).
(Wave guides)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0

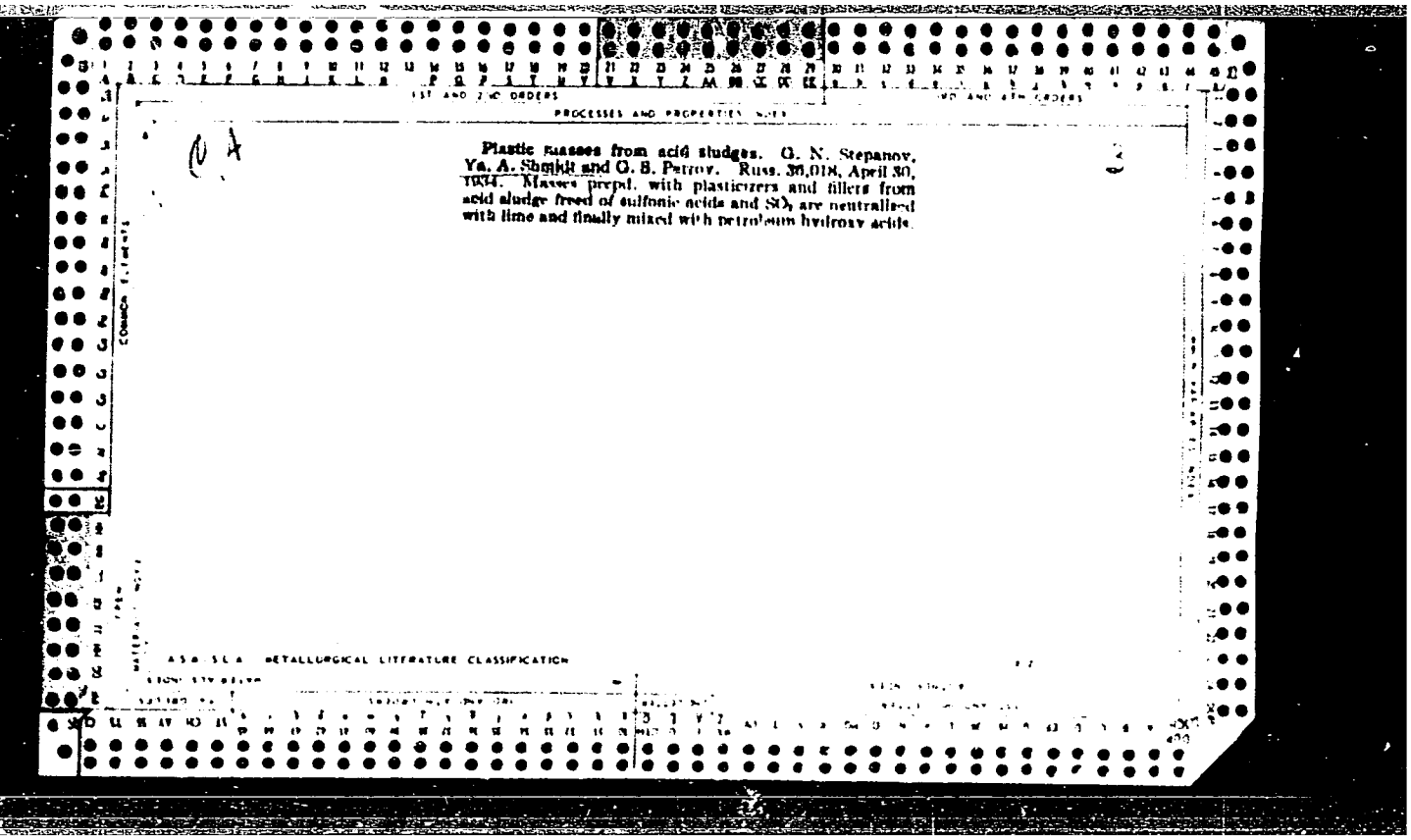


Acrolein resins. G. S. Petrov and Va. A. Shmidt. *Plasticheskie Massui* 1931, No. 1, 2, 27–30. Such resins result in good yield even on varying the amts. of PhOH and glycerol and the catalysts. They have many advantages over $PhOH$-$CH_2O$ resins. Glycol cannot replace glycerol in their prepn.

H. M. Leicester

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0"

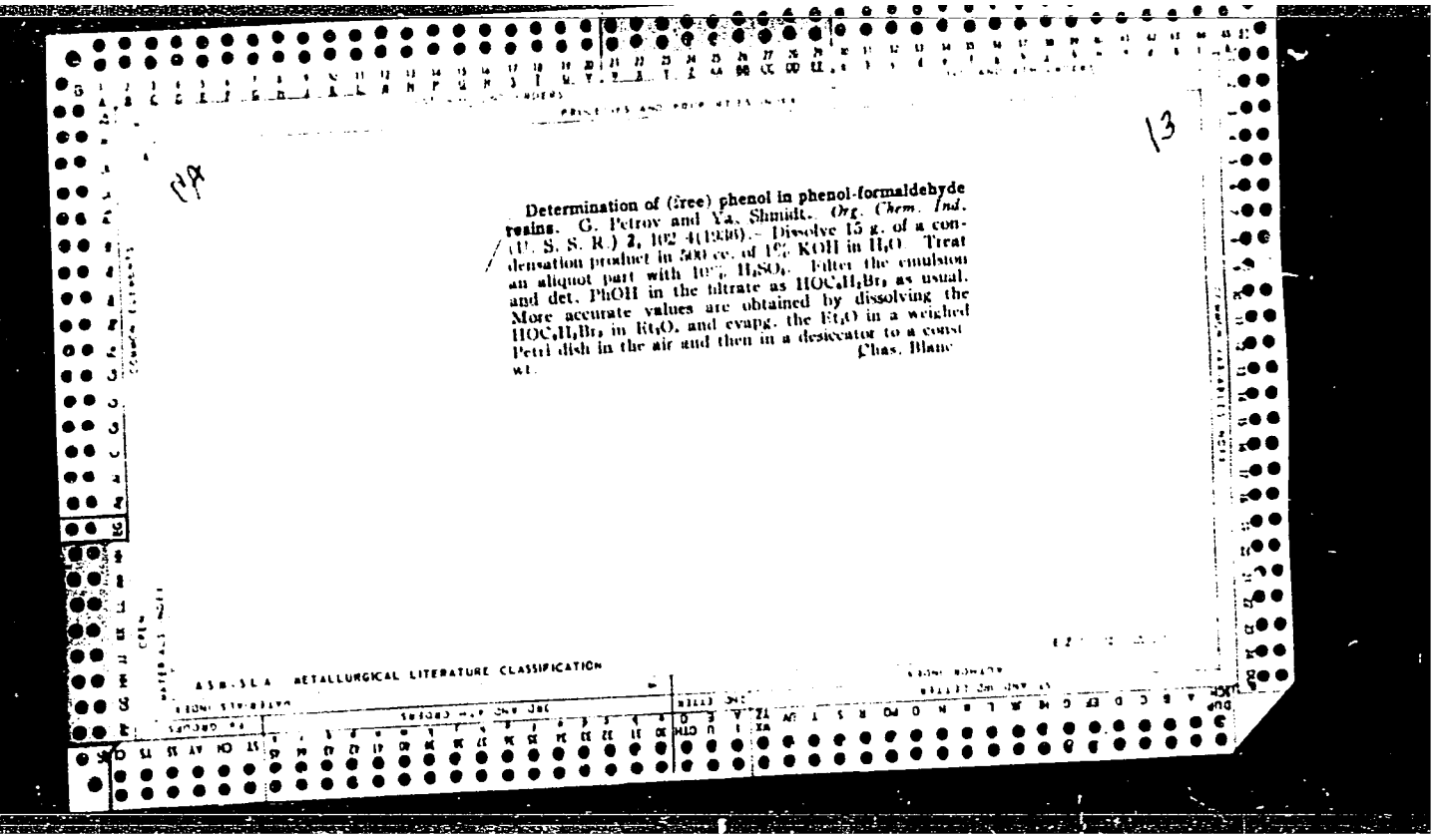
"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0



Plastic masses from acid sludges. G. N. Stepanov, Ya. A. Shmidt and O. B. Petrov. Russ. 39,018, April 30, 1934. Masses prepd. with plasticizers and fillers from acid sludge freed of sulfonic acids and $SO_2$ are neutralized with lime and finally mixed with petroleum hydrocarbons.

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0



Determination of (free) phenol in phenol-formaldehyde resins. G. Petrov and Ya. Shmidt. *Org. Chem. Ind.* (U. S. S. R.) **2**, 102-4(1938).— Dissolve 15 g. of a condensation product in 500 cc. of 1% KOH in $H_2O$. Treat an aliquot part with 10% $H_2SO_4$. Filter the emulsion and det. PhOH in the filtrate as $HOC_6H_2Br_3$ as usual. More accurate values are obtained by dissolving the $HOC_6H_2Br_3$ in $Et_2O$, and evapg. the $Et_2O$ in a weighed Petri dish in the air and then in a desiccator to a const wt.

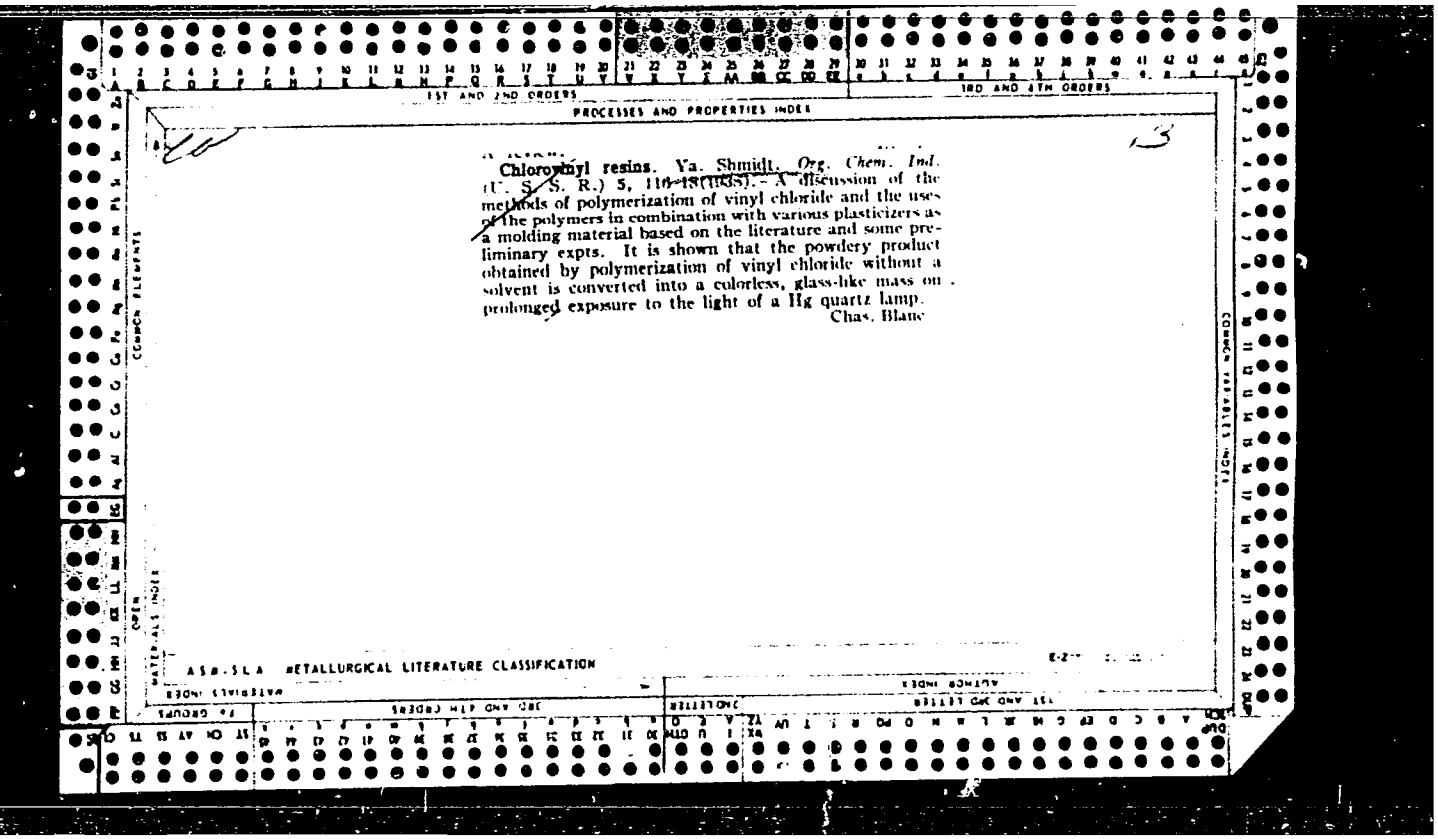
Chas. Blanc

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0

1ST AND 2ND ORDERS

3RD AND 4TH ORDERS



PROCESSES AND PROPERTIES INDEX

10

13

**Chlorovinyl resins.** Ya. Shmidt. *Org. Chem. Ind.* (U. S. S. R.) 5, 116-18(1938).—A discussion of the methods of polymerization of vinyl chloride and the uses of the polymers in combination with various plasticizers as a molding material based on the literature and some preliminary expts. It is shown that the powdery product obtained by polymerization of vinyl chloride without a solvent is converted into a colorless, glass-like mass on prolonged exposure to the light of a Hg quartz lamp.

Chas. Blanc

COMMON ELEMENTS

COMMON VARIABLES INDEX

OPEN

MATERIALS INDEX

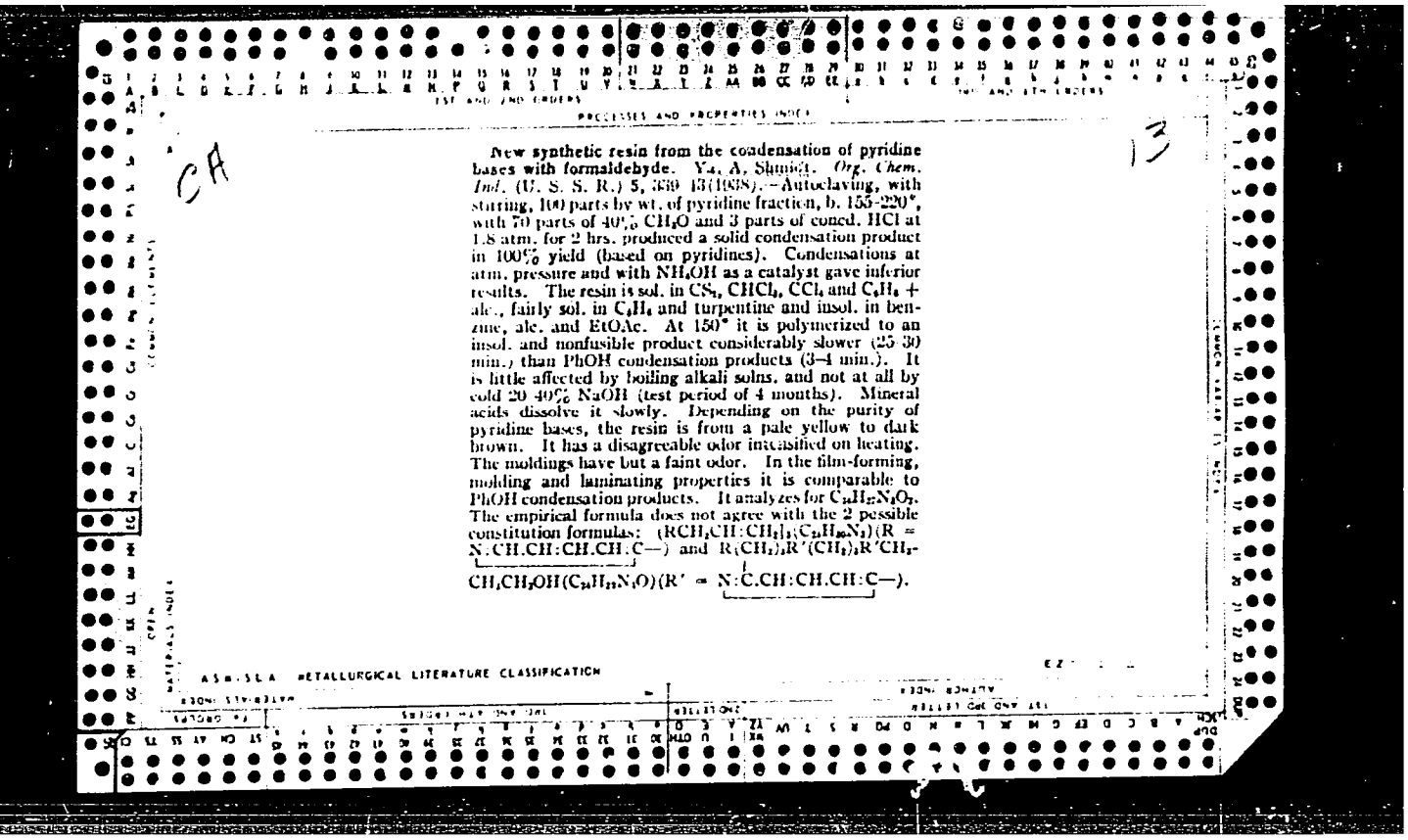
ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

MATERIALS INDEX

AUTHOR INDEX

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0



CA

13

**New synthetic resin from the condensation of pyridine bases with formaldehyde.** Ya. A. Shmidt. *Org. Chem. Ind.* (U. S. S. R.) 5, 359–13(1938).—Autoclaving, with stirring, 100 parts by wt. of pyridine fraction, b. 155–220°, with 70 parts of 40% $CH_2O$ and 3 parts of concd. HCl at 1.8 atm. for 2 hrs. produced a solid condensation product in 100% yield (based on pyridines). Condensations at atm. pressure and with $NH_4OH$ as a catalyst gave inferior results. The resin is sol. in $CS_2$, $CHCl_3$, $CCl_4$ and $C_6H_6$ + alc., fairly sol. in $C_6H_6$ and turpentine and insol. in benzine, alc. and EtOAc. At 150° it is polymerized to an insol. and nonfusible product considerably slower (25–30 min.) than PhOH condensation products (3–4 min.). It is little affected by boiling alkali solns. and not at all by cold 20–40% NaOH (test period of 4 months). Mineral acids dissolve it slowly. Depending on the purity of pyridine bases, the resin is from a pale yellow to dark brown. It has a disagreeable odor intensified on heating. The moldings have but a faint odor. In the film-forming, molding and laminating properties it is comparable to PhOH condensation products. It analyzes for $C_9H_{12}N_2O_2$. The empirical formula does not agree with the 2 possible constitution formulas: $(RCH_2CH{:}CH_2)_2(C_9H_{10}N_2)$(R = N:CH.CH:CH.CH:C—) and $R_2(CH_2)_2R'(CH_2)_2R'CH_2CH_2CH_2OH(C_9H_{12}N_2O)$(R′ = N:C.CH:CH.CH:C—).

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0

Shmidt, Ya. A.

USSR

Synthesis of polyurethans. A. A. Strepikheev, A. A. Artem'ev, and Ya. A. Shmidt. *Issledovaniya v Oblasti Vysokomolekul. Soedinenii. Doklady 6-oi Konf. Vysokomolekul. Soedineniyam, Akad. Nauk S.S.S.R.* 1949, 69–77.—Polymerization of hexamethylene diisocyanate (I) with $(CH_2)_4(OH)_2$ was run in PhCl at reflux, yielding after 30–60 min. a ppt. of the polymer, although the viscosity of the product continues to rise with longer heating and the max. mol. wt. is attained after 6 hrs. heating. The product, m. 172–9°, has the highest viscosity when the initial components are used in a strict 1:1 molar ratio. Polyurethans were also prepd. from $(CH_2)_4(OH)_2$, $O(CH_2CH_2OH)_2$, and $S(CH_2CH_2OH)_2$ with I; all were inferior in mech. properties to the products described above. Polymerization of I with $HN(CH_2CH_2OH)_2$ was run similarly and the reaction was complete in 1–2 hrs. The product was sol. in hot $H_2SO_4$ and $PhN(CH_2CH_2OH)_2$, but with decompn. of the polymer; the polyurethan was hygroscopic and had poor mech. properties. The polymer of I with $MeN(CH_2CH_2OH)_2$ was soft and elastic and sol. in many org. solvents. The use of branched diol in conjunction with I gave relatively soft polymers which were elastic and had fair mech. properties except for poor elongation. Treatment of I with a soln. of $(CH_2)_6(NH_2)_2$ immediately gave a ppt. of the polyurea; PhCl was the only solvent that formed a film-forming product; $Me_2CO$, dioxane, $H_2O$ and $o$-$C_6H_4Cl_2$ gave products of low viscosity. The product, made in PhCl, m. 280–90°. Similar *polyureas* prepd. from I and other *diamines* had the following m.ps. (diamine given): $(CH_2)_4(NH_2)_2$, m. 220–5°; $(CH_2)_6(NH_2)_2$, m. 210°; *piperazine*, m. 215°. The products can be fractionated by pptn. from $HCO_2H$ solns. The polyureas pick up 3–8.5% $H_2O$ on exposure to air at various humidity levels; they are sol. in org. acids and can be heated in concd. $H_2SO_4$; hot 4% NaOH does not affect the product and the latter remains elastic in film form even at −15°.

G. M. Kosolapoff

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0

SCHMIDT, YA. A.

Aromatic acids and aliphatic acid amides. Ya. A. Schmidt, V. S. Khaliov, L. L. Knunyants, and A. A. Artem'ev. U.S.S.R. 105,830, May 25, 1957. The title compds. are obtained by sapong. nitriles of aromatic and aliphatic acids. The sapon. is carried out with $H_2O$ at 250–70° and 50 atm. pressure. M. Hoseh

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0

SHMIDT, YA. A

S/064/60/000/004/002/006
B015/B060

AUTHORS: Shmidt, Ya. A., Tsimbal, Yu. M., Rubinskaya, I. K.

TITLE: Chemical Methods of Separating Cyclohexanone From the Reaction Mixture

PERIODICAL: Khimicheskaya promyshlennost', 1960, No. 4, pp. 14-17

TEXT: The authors studied the possibility of separating cyclohexanone from the reaction mixture obtained in the oxidation of cyclohexane, where sodium bisulfite and hydroxylamine sulfate were also used. Experiments made with a 50% sodium bisulfite solution and reaction mixtures with a cyclohexanone content of about 4% showed (Table 1) that the reaction took place at a relatively fast rate, and cyclohexanone was completely bound by means of sodium bisulfite. The completeness of the reaction is not influenced by the concentration of sodium bisulfite (Table 2), while losses occur at concentrations of sodium bisulfite exceeding 10%. The aqueous solution of the bisulfite compound of cyclohexanone is intermixed with hydroxylamine sulfate (in slight excess) and 5 N $H_2SO_4$, and cyclo-

Card 1/2

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0



hexanone oxime is thus obtained (Table 3, results at different ratios of concentrations). Attempts at an oximation of strongly dilute solutions of cyclohexanone in cyclohexane by means of hydroxylamine sulfate, which were conducted with and without prior neutralization of the solution with ammonia (Table 4) on artificial and reaction mixtures (Table 5), revealed that also in this manner the intermediate product of caprolactam synthesis - cyclohexanone oxime - can be separated in a high yield. There are 5 tables and 9 references: 1 Soviet, 1 Swiss, 1 US, 1 French, 2 German, and 3 British.



APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0

SHMIDT, Ya.A.; TSIMBAL, Yu.M.; RUBINSKAYA, I.K.

Chemical methods of isolating cyclohexanone from the reaction mixture. Khim.prom. no.4:278-281 Je '60. (MIRA 13:8)

(Cyclohexanone)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0

SHMIDT, Ya.A.; KEL'TSEVA, O.B.; SIMONOVA, N.I.

Use of nitro paraffins in the production of caprolactam. Khim.prom. no.1:15-17 Ja '62. (MIRA 15:1)
(Azepinone) (Paraffins)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0"

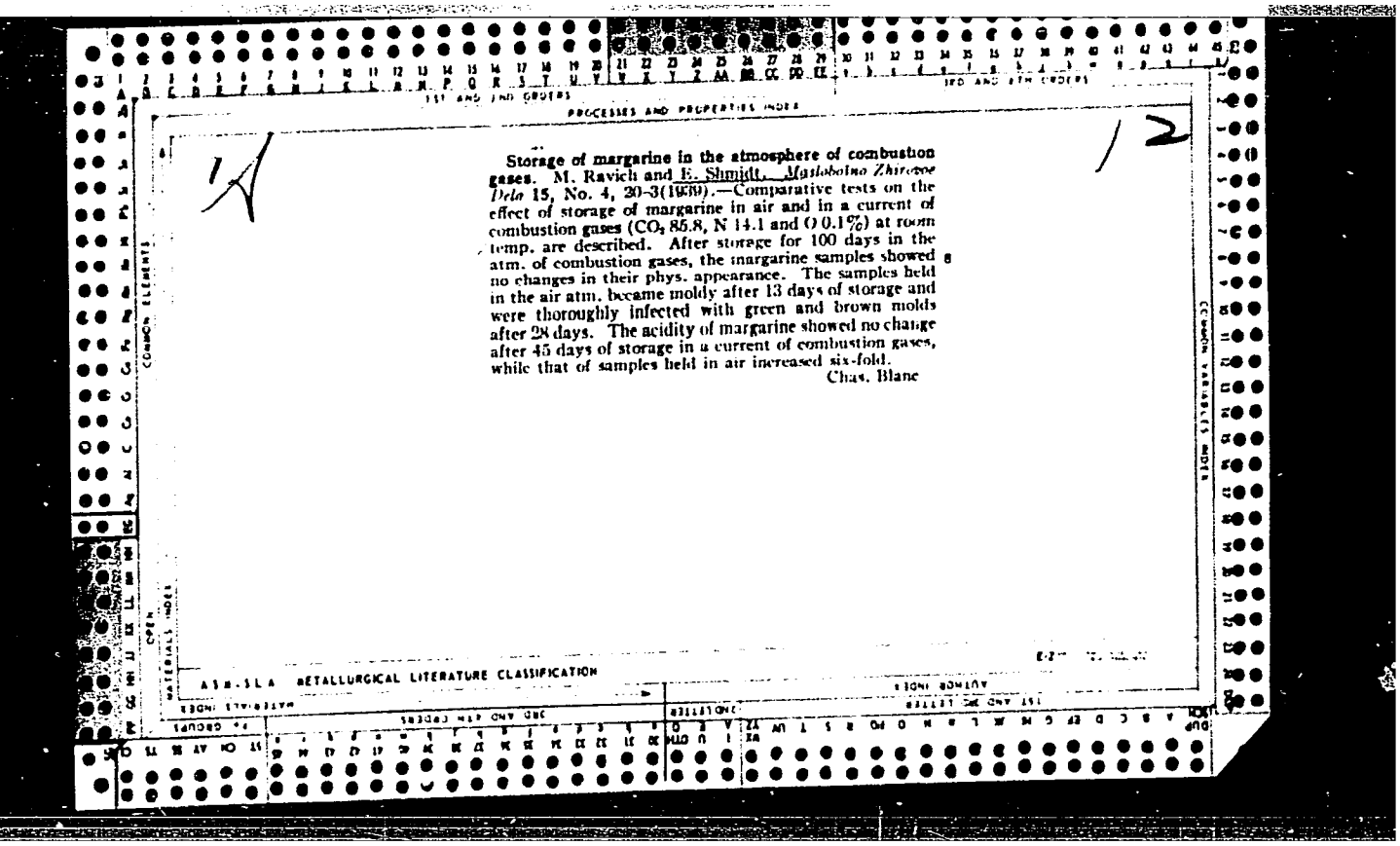
"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0

SHMIDT, Ye.

"On the pathology of the nervous system in hypertension" by B.N. Man'kovskii, V.M.Slonimskaia, Z.N.Dracheva. Reviewed by E.Shmidt. Zhur. nevr. i psikh. 61 no.6:947-950 '61. (MIRA 15:2)
(NERVOUS SYSTEM--DISEASES) (HYPERTENSION)
(MAN'KOVSKII, B.N.) (SLONIMSKAIA, V.M.) (DRACHEVA, Z.N.)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0

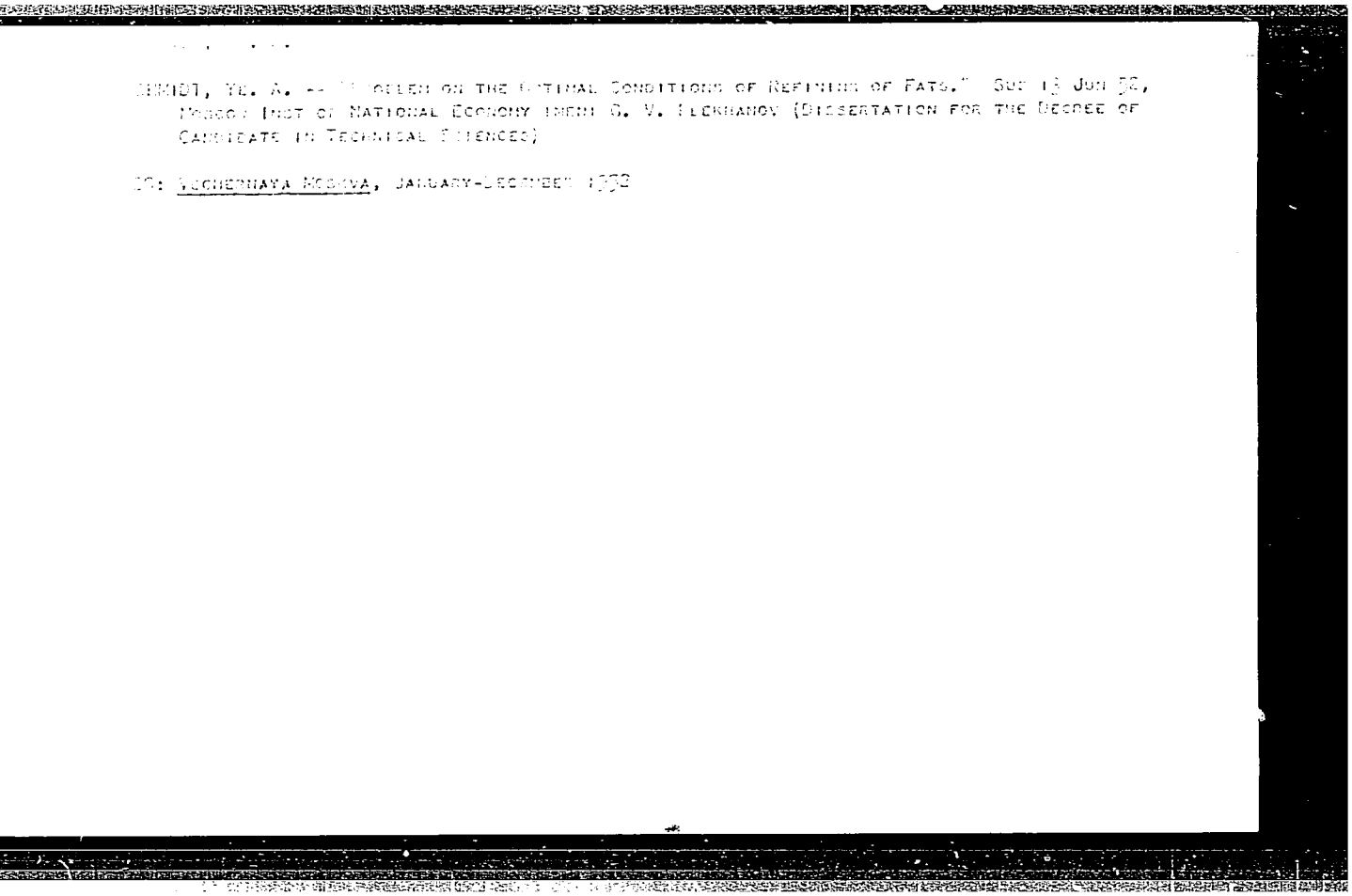


**Storage of margarine in the atmosphere of combustion gases.** M. Ravich and E. Shmidt. *Maslobolno Zhirovoe Delo* 15, No. 4, 30-3(1939).—Comparative tests on the effect of storage of margarine in air and in a current of combustion gases ($CO_2$ 85.8, N 14.1 and O 0.1%) at room temp. are described. After storage for 100 days in the atm. of combustion gases, the margarine samples showed no changes in their phys. appearance. The samples held in the air atm. became moldy after 13 days of storage and were thoroughly infected with green and brown molds after 28 days. The acidity of margarine showed no change after 45 days of storage in a current of combustion gases, while that of samples held in air increased six-fold.

Chas. Blanc

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0



SCHMIDT, Ye. A. -- "[illegible] on the Optimal Conditions of Refining of Fats." Sub 13 Jun 52, Moscow Inst of National Economy imeni G. V. Plekhanov (Dissertation for the Degree of Candidate in Technical Sciences)

SO: Vechernaya Moskva, January-December 1952

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0

SHMIDT, Ye.A., kandidat tekhnicheskikh nauk.

Processing of oils in the production of varnishes and lacquers. Masl.-zhir. prom. 23 no.3:40-42 '57. (MLRA 10:4)

1. Rosglavraszhirmaslo.
(Oils and fats) (Varnish and varnishing)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0

SHMIDT, Ye.A., kandidat tekhnicheskikh nauk.

Distillation of fatty acids obtained from soap stock. Masl.-zhir. prom. 23 no.5:41-42 '57. (MIRA 10:5)

1. Rosglavraszhirmaslo.
(Distillation apparatus) (Acids, Fatty)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0

SHMIDT, Ye.A., kand. tekhn. nauk.

Refining various oils at oil and fat plants in the Chinese People's Republic. Masl.-zhir. prom. 23 no.8:40-42 '57. (MIRA 10:12)

1. Gosplan RSFSR.

(China--Oils and fats)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0

MINEVICH, F.N., inzh.; SHMIDT, Ye.A., kand.tekhn.nauk

Expanding the processing of customers' sunflower seeds in the enterprises of the economic councils of the R.S.F.S.R. Mashl.-zhir. prom. 29 no.9:26-28 S '63. (MIRA 16:10)

1. Gosplan RSFSR.

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0

[illegible] Ye.V.

[illegible] analysis of hearths, basic slags of open-hearth furnaces, and chromium-magnesite refractories. Zav. lab. 30 no.10:1092 '64. (MIRA 18:3)

1. Kuznetskiy metallurgicheskiy zavod.

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0

VALEYKO, N.K.; SHMIDT, Ye.D.

Clinical study of phenylin in patients with cardiovascular diseases. Terap.arkh. 31 no.4:52-55 Ap '59. (MIRA 14:5)

1. Iz fakul'tetskoy terapevticheskoy kliniki (zav. - prof. B.P. Kushelevskiy) Sverdlovskogo meditsinskogo instituta.
(INDANDIONE) (BLOOD--COAGULATION)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0

KUSHELEVSKIY, B.P., SHMIDT, Ye.D. (Sverdlovsk)

Significance of thrombosis and embolism in general hopital mortality and the preventive role of anticoagulants. Klin.med. 36 no.5:22-28 My '58 (MIRA 11:7)

1. Iz fakul'tetskoy terapevticheskoy kliniki (zav. - prof. B.P. Kuleshevskiy) Sverdlovskogo meditsinskogo instituta i patologoanatomicheskogo otdeleniya (zav. A.N. Sobakina) Gorodskoy klinicheskoy bol'nitsy No.1.

(THROMBOSIS, therapy,
anticoagulants, eff. on mortal. statist. (Rus))
(EMBOLISM, therapy,
same (Rus))
(ANTICOAGULANTS, therapeutic use
embolism & thrombosis, eff. on mortal, statist. (Rus))

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0

ROZENBIAT, F.Y., doktor med. nauk; SHMIDT, Ye.D. (Sverdlovsk)

Therapeutic and prophylactic use of anticoagulants in rheumatic heart disease. Klin. med. 37 no.5:71-76 My '59. (MIRA 12:8)

1. Iz kafedry fakul'tetskoy terapii (zav. - zasluzhennyy deyatel' nauki B.P. Kushelevskiy) Sverdlovskogo meditsinskogo instituta.
(RHEUMATIC HEART DISEASE, compl.
thrombosis, value of anticoagulants in prev. & ther. (Rus))
(THROMBOSIS, etiol. & pathogen.
rheum. heart dis., value of anticoagulants in prev. & ther. (Rus))
(ANTICOAGULANTS, ther. use
thrombosis in rheum. heart dis., prev. & ther. (Rus))

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0

S/194/62/000/006/027/232
D295/D308

9.2140

AUTHOR: Shmidt, Ye.V.

TITLE: Relaxation-type photo-electric relay

PERIODICAL: Referativnyy zhurnal. Avtomatika i radioelektronika, no. 6, 1962, abstract 6-2-18 b (Mashinostr. i energ. Kazakhstana, Nauchno-tekhn. sb., no. 5, (15), 1961, 65-66)

TEXT: A photo-electric relay is described which uses a relaxation oscillator controlled by a photo-electronic transducer, and sensitive polarized relay with a neutral 2-position tuning. The circuit ensures reliable operation of the actuating relay both in closing and opening the contacts. Stability is ensured by a suitable choice of the resistance. A СГ-2 (SG-2) type stabilotron is used to increase stability. Either the РП-4 (RP-4) or ТРМ (TRM) relay can be used as the intermediate polarized relay, and the МКУ-48 (MKU-48) or ЭП-41 (EP-41) as the actuating relay. The photo-relay is used for automatic light switching. 1 figure. [Abstracter's note: Complete translation.]

Card 1/1

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0

SHMIDT, Ye.F.

Differentiation of nodule bacteria strains based on the data of "nonsubstrate" dehydrase activity determination. Mikrobiologiia 33 no.2:284-291 Mr-Ap '64. (MIRA 17:12)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0

[illegible]', [illegible]

Shmidt', [illegible]. "Clinic by angioreticule of the cerebellum," Sbornik nauch. rabot, [illegible]. [illegible]-letiyu prof. Seppa, Moscow, 1948, p. 216-44

SO: [illegible]-3264, 1[illegible] April 1[illegible], (Letopis 'Zhurnal 'nykh Statey, No. 3, 1949)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0

SMIDT, Ye. V.

PA 23/49T82

USSR/Medicine - Polycythemia Sep/Oct 48
Medicine - Nervous System, of

"Cerebral Polycythemia," Ye. V. Smidt, Clinic of Nervous Diseases, First Moscow Ord of Lenin Med Inst, and Inst of Neurosurg, Acad Med Sci USSR, 4½ pp

"Nevropatol i Psikhiat" Vol XVII, No 5

Describes and discusses five cases of subject disease. Submitted 12 Dec 48.

23/49T82

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0

SHMIDT, Ye. V.

SHMIDT, Ye. V. - "Angioreticuloma of the Cerebrum." Sub 11 Apr 52, Acad Med Sci USSR. (Dissertation for the Degree of Doctor in Medical Sciences).

SO: Vechernaya Moskva January-December 1952

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0

SHMIDT, Ye.V.

KONOVALOV, N.V.; SHMIDT, Ye.V.

Several problems in the etiology and patnogenesis of hypertonic illness. Zh. Nevropat. Psikhiat., '52, 52, no.9, 3-10. (MLRA 5:9)
(PsA 27, no.8:6068 '53)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0

SHMIDT, Ye. V.

SHMIDT, Ye.V.; SUKHOVSKAYA, N.A.

Effect of verbal conditioned stimulation on the visual analysor. Report no.1. Zhur.vys.nerv.deiat. 3 no.6:809-815 N-D '53. (MLRA 7:5)

1. Laboratoriya fiziologii i patologii zreniya Instituta nevrologii AMN SSSR.
(REFLEX, CONDITIONED,
*verbal conditioned stimulation of visual analysor)
(EYE, physiology, VISION,
*verbal conditioned stimulation of visual analysor)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0

SHMIDT, Ye.V.

Seventy-fifth birthday of Evgenii Konstantinovich Sepp. Zhur.nevr.i psikh. 53 no.8:669-671 Ag '53. (MLRA 6:9)

(Sepp, Evgenii Konstantinovich, 1878- )

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0

SHMIDT, Ye.V., redaktor

[Seventh scientific session devoted to the problem of the restoration of functions following interruption of cerebral blood circulation] Sed'maia nauchnaia sessiia, posvyashchennaya probleme vosstanovleniia funktsii posle narusheniia mozgovogo krovoobrashcheniia. 22-25 dek., 1954. Pod red. E.V.Shmidta. Moskva, 1954. 49 p. (MLRA 10:3)

1. Akademiya meditsinskikh nauk SSSR, Moscow. Institut nevrologii.
(BRAIN--BLOOD SUPPLY)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0

MYASNIKOV, A.L., professor, redaktor; VISHNEVSKIY, A.A., professor; CHERNIGOVSKIY, V.N., professor; SHMIDT, Ye.V., professor, doktor meditsinskikh nauk; MIKHAYLOV, A.K., redaktor; SACHEVA, A.I., tekhnicheskiy redaktor.

[Sleep therapy; transactions of the enlarged session of the Presidium of the Academy of Medical Sciences of the U.S.S.R. with participation of the Ryazan I.P. Pavlov Medical Institute on February 27-28, 1953] Lechenie snom. Trudy rasshirennogo zasedaniia prezidiuma Akademii meditsinskikh nauk SSSR s uchastiem Riazanskogo meditsinskogo instituta imeni I.P. Pavlova 27-28 fevralia 1953 g. Red. kollegiia: A.L. Miasnikov (otv.red.) i dr. Moskva, Gos. izd-vo meditsinskoi lit-ry, 1954. 217 p.(MLRA 7:12)

1. Deystvitel'nyy chlen AMN SSSR (for Myasnikov, Chernikovskiy).2. Chlen-korrespondent AMN SSSR (for Vishnevskiy) 3. Akademiya meditsinskikh nauk SSSR, Moscow.

(Sleep--Therapeutic use)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0

SEPP, Evgeniy Konstantinovich, professor, zasluzhennyy deyatel' nauki, redaktor; TSUKER, Mariya Borisovna; SHMIDT, Evgeniy Vladimirovich; KUDRYAVTSEV, M.A., redaktor; SACHEVA, A.I., tekhnicheskiy redaktor

[Nervous diseases; textbook] Nervnye bolezni (uchebnik). Pod obshchei red. E.K.Seppa. Izd. 5-e (perer.) Moskva, Gos. izd-vo meditsinskoi lit-ry, 1954. 554 p. (MLRA 8:1)

1. Deystvitel'nyy chlen Akademii meditsinskikh nauk SSSR (for Sepp) (Nervous diseases--Diseases)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0

SHMIDT, Ye.V., professor

Studies on neuroses at the Institute of Neurology of the Academy of Medical Sciences of the U.S.S.R. Vest. AMN SSSR no.3:35-40 '54. (MLRA 7:11)

1. Iz Instituta nevrologii AMN SSSR.
(PSYCHIATRY, education, Russia)
(EDUCATION, MEDICAL, in Russia, psychiatry)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0

SHMIDT, Ye.V.; SUKHOVSKAYA, N.A.

Physiopathology of sensory aphasia; result of application of the conditioned reflex method for detection of certain mechanisms of cortical speech disorders. Zhur. nevr. i psikh. 54. no.12:987-995 D '54. (MLRA 8:2)

1. Institut nevrologii i Institut farmakologii AMN SSSR.
(APHASIA, phyiology,
conditioned reflex detection of cortical mechanism)
(REFLEX, CONDITIONED,
in aphasia, detection of cortical mechanism)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0

[redacted], Ye. N., Moscow

"Some Forms of Tick-borne (Spring-Summer) encephalitis," a paper submitted at the 2nd International Congress of Neuropathology, London, Sep. 1955.

A-47574.

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0

SHMIDT, Ye. B.

"A new Aspect of Primary Malignant Tumours of the Nervous System: Angioperitheliosarcoma and its Connection with Glioblastoma Multiforme," a paper submitted at the 2nd International Congress of Neuropathology, London, Sep 1955.

A-47574

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0

SHMIDT, Evgenii Vladimirovich

[Angioreticuloma of the brain] Angioretikuloma golovnogo mozga. M,Medgiz, 1955. 180 p. (MLRA 8:11)
(BRAIN--TUMORS)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0

Category: USSR/General Division. Congresses.Conventions. Conferences. A-4

Abs Jour: Referat Zh.-Biol., No 9, 10 May 1957, 34943

Author : Shmidt, E.V., Vinokurov, K.A.
Inst : not given
Title : The IIIrd International Conference on Poliomyelitis

Orig Pub: Zh. nevropatol. ipsikhiatii, 1955, 55, No 2, 156-159

Abstract: A short summary of the reports of the conference which took place in Rome 6-10 September, 1954, and which was devoted to the virusology, immunology, epidemiology, clinic, treatment, vaccination, and social problems of the prophylaxis of poliomyelitis.

Card : 1/1 -17-

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0

SHMIDT, Ye.V.

"Acta neurologica," Italian periodical on neuropathology and psychiatry (bimonthly review), 1953, nos.1-6; 1954, nos.1-4. Section on Neurology. Reviewed by E.V.Shmidt. Zhur.nevr. i psikh.55 no.8:624-629 '55. (MLRA 8:10)
(NEUROLOGY)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0

SHMIDT, Ye.V., professor; GOLLAND, E.B.

Radiculitis. Zdorov'e 2 no.5:13-14 My '56. (MLRA 9:8)
(NERVOUS SYSTEM--DISEASES)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0

GRASHCHENKOV, N.I.,professor.,; SHMIDT, Ye.V.,professor.,;
SEMENOVA-TYAN-SHANSKAYA, V.V.,professor.

Report of the Soviet delegation to the Second International Congress of Neuropathologists in London, September 12-17 1955.
Vest. AMN SSSR 11 no.1:66-74 '56. (MLRA 9:5)

1. Deystvitel'nyy chlen AMN SSSR (for Grashchenkov)
(LONDON--NEUROLOGY--CONGRESSES)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0

SHMIDT, Ye.V.; BASSIN, F.V.

"Higher nervous activity in man"; a collection of works [in Czech]. Reviewed by E.V.Shmidt, F.V.Bassin. Zhur.nevr. i psikh. 56 no.6: 510-513 '56. (MIRA 9:8)
(PSYCHOLOGY, PHYSIOLOGICAL)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0

SHMIDT, Ye. V. (Prof.) Moscow

O Novykh Dannykh v Probleme Epidemicheskogo Poliomielita P. 395

V sb Aktual'nyy Problemy Nevropatologii i Psikhiatrii, Kuybyshev, 1957.

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0

SHMIDT, Ye.V., professor; ALEKSANDROVA, L.I.

Rumanian neurology and Rumanian neurologists. Vest. AMN SSSR 12 no.4:79-83 '57. (MIRA 10:10)
(RUMANIA--NEUROLOGY)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0

SHMIDT, Ye. V.

MYASISHCHEV, V.N.; SHMIDT, Ye.V.

First Congress of Czechoslovak neurologists. Zhur.nevr. i psikh. 57 no.5:666-672 '57. (MIRA 10:8)
(NEUROLOGY)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0

SHMIDT, Ye.V., prof.

Study of the functional mobility of the optic analysor as one of the methods for studying the higher nervous activity. Vest.AMN SSSR 13 no.3:30-38 '58. (MIRA 11:4)

(REFLEX, CONDITIONED,
visual, determ. of higher nervous activity in var. neural disord. (Rus)
(VISION,
conditioned reflexes in determ. of higher nervous activity in var. neurol. disord. (Rus)
(NERVOUS SYSTEM, diseases,
conditioned visual reflexes in determ. of higher nervous activity (Rus)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0

SHMIDT, Ye.V., prof.; MAKINSKIY, T.A.

Studies on vascular diseases of the nervous system in the Soviet Union in 1958; based on data from the first conference on research planning and coordination conducted by the Institute of Neurology of the Academy of Medical Sciences of the U.S.S.R. in November 1957] Issledovaniia v oblasti sosudistykh porazhenii nervnoy sistemy v Sovetskom Soiuze v 1958 g.; po materialam pervogo soveshchaniia po planirovaniiu i koordinatsii nauchnykh issledovanii, provedennogo Institutom nevrologii AMN SSSR v noiabre 1957 g. Vest. AMN SSSR 13 no.4:63-68 '58. (MIRA 11:4)

(BRAIN, blood supply, dis., review (Rus))

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0

SHMIDT, Ye.V. (Moskva)

Current status of the problem of vascular lesions of the brain. (MIRA 11:11)
Zhur.nevr. i psikh. 28 no.9:1138-1147 '58
(BRAIN, blood supply,
dis., review (Rus))

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0

SHMIDT, Ye.V.

"Cerebral hemorrhage from the neurosurgical point of view" [in French] by G. Lazorthes. Reviewed by E.V. Shmidt. Zhur. nevr. i psikh. 28 no.9: 1147-1149 '58 (MIRA 11:11)
(BRAIN--HEMORRHAGE)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0

SHMIDT, Ye.V., ALEKSANDROVA, L.I. (Moscow)

Neurology in the Rumanian People's Republic. Zhur.nevr i psikh 58 no.2 249-254 '58. (MIRA 11:5)

(NEUROLOGY,
in Rumania (Rus))

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0

SHMIDT, Ye.V., prof. (Moskva)

Surgical therapy of cerebral stroke; a survey. Vopr.neirokhir. 23 no.2:40-46 Mr-Ap '59. (MIRA 12:4)
(CEREBRAL HEMORRHAGE, surgery, review (Rus))

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0

SHMIDT, Ye.V.; DZHIBLADZE, D.N.

Clinical aspects of thrombosis of the carotid artery in the neck. Zhur.nevr. i psikh. 59 no.8:897-906 '59. (MIRA 12:12)

1. Institut nevrologii (dir. - prof. N.V. Konovalov) AMN SSSR, Moskva.

(CAROTID ARTERIES, dis.)
(THROMBOSIS)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0

KREYNDLER, A.[Kreindler, A.], akademik; BERGINER, V.M.[translator]; FALIKOV, Sh.M.[translator]; SHMIDT, Ye.V., prof., red.; BASSIN, F.V., doktor med.nauk, red.; GABERLAND, M.I., tekhn. red.

[Epilepsy; clinical and experimental studies]Epilepsiia; klinicheskie i eksperimental'nye issledovaniia. Pod red. E.V. Shmidta i F.V.Bassina. Moskva, Medgiz, 1960. 506 p. Translated from the Rumanian. (MIRA 16:4)

1. Chlen-korrespondent Akademii meditsinskikh nauk SSSR (for Shmidt). (EPILEPSY)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0

SHMIDT, E.V.

Thrombosis of the carotid artery. Suvrem med., Sofia no.7-8:3-11 '60.

1. Iz Instituta po nevrologiia na AMN SSSR (Direktor prof. N.V. Konovalov)
(ARTERIOSCLEROSIS compl)
(CAROTID ARTERIES dis.)
(THROMBOSIS)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0

SHMIDT, Ye.V., prof.; KACHKO, V.A., vrach

Headache. Zdorov'e 6 no.5:11-13 My '60. (MIRA 13:6)

1. Calen AMN SSSR (for Shmidt).
(HEADACHE)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549810003-0"